

VARICHAETADRILUS MINUTUS
(BRINKHURST, 1965) NEW COMBINATION FOR
PSAMMORYCTIDES (?) MINUTUS
(OLIGOCHAETA: TUBIFICIDAE)

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Abstract. — *Psammoryctides minutus* is transferred to *Varichaetadrilus* because of the resemblance of the penis sheaths and penial setae to those of members of that genus.

Psammoryctides minutus was tentatively assigned to the genus *Psammoryctides* when first discovered (Brinkhurst 1965) and was listed incertae sedis in that genus by Brinkhurst (1971). The doubt about its generic placement was due to the lack of material which prevented a complete description of the male ducts. A dissection revealed one fragment of the male duct, which suggested that after the atrium narrowed to form the ejaculatory duct, a second enlarged section existed before the duct narrowed a second time to enter the base of the penis. This pattern resembles the form of the atria in other North American species of *Psammoryctides* reviewed by Loden (1978), and so it was assigned to the subgenus *Spencerius* by that author. This subgenus includes all of the North American species, the exception, *Psammoryctides barbatus* (Grube, 1861), is clearly an introduction to the St. Lawrence River from Europe.

The major obstacle to acceptance of this decision is the absence of the characteristic long, thin, spermathecal setae and the presence instead of penial setae. These penial setae are wider than normal ventrals (8 μm), and longer (147 μm versus 71–85 μm). They are very short distally, but have clearly bifid distal ends. Such penial setae have been described in *Varichaetadrilus* (Brinkhurst 1981, Brinkhurst and Kathman 1983).

Examination of the drawings of the penis of *P. minutus*, independently confirmed by Loden, show a small penis sheath set on the distal end of a large penial mass. This too is reminiscent of the form of the penis in *Varichaetadrilus*, in which the main body seems to be erectile.

The apparent difference in the terminal portion of the atrium and ejaculatory duct between *minutus* and the ducts of *Varichaetadrilus* species could be explained by stretching during the dissection process. Confirmation of the generic position of this species requires acquisition of new material of this scarce species, known only from one lake in Alberta and Lake Tahoe, but it is clearly much more appropriately placed in *Varichaetadrilus* than in *Psammoryctides*.

While *minutus* is quite similar to *V. pacificus* (Brinkhurst, 1981), the latter has more hair and pectinate setae anteriorly, the hair setae are found in postclitellar bundles, and there are more posterior ventral setae per bundle. The penis sheaths of *pacificus* are spool-shaped as opposed to conical.

Varichaetadrilus nevadana (Brinkhurst, 1965), transferred to this genus from *Isochaetides* (Brinkhurst, 1981), lacks genital setae but is otherwise quite similar

to *minutus*. There are distinct differences in setal form and number, however. This species is restricted to Lake Tahoe. Another species with distinct setae, *V. israelis*, is restricted to Lake Tiberias, Israel.

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